

### **Remarks**

Reconsideration of the above-identified application in view of the present Amendment is respectfully requested.

Claims 1-8 are pending in the present application. Claims 1-4 and 7-9 are rejected under 35 U.S.C. § 102(a). Claims 7-9 are rejected under § 103(a). Claims 5, 6, and 10 are rejected under 35 U.S.C § 112.

Claim 1 is amended to include a carrier as part of the electric motor. Claim 1 is further amended to include the phrase "and positioned atop of the carrier to form a first component of the electric machine" which clarifies that the admixture is on top of the carrier. The antecedent basis for this amendment is in paragraph 39 of the present invention. Claim 5 is amended to replace the word "component" with carrier. Paragraph 42 states that the carrier may be aluminum. Claim 10 is amended to depend from claim 9. No new matter has been added by these amendments.

#### **A. Rejection Under 35 U.S.C. § 112**

Claims 5, 6, and 10 are rejected under 35 U.S.C § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

Claim 1 is amended to include a carrier as a component of the electric machine of the present invention. Claim 5 is amended so that the word component is replaced by "carrier." This clarifies that the carrier may be aluminum. Accordingly, the lack of antecedent basis in claim 5 is corrected. Similarly, claim 6 states that the carrier is iron. The lack of antecedent basis in claim 6 is corrected by the incorporation of a carrier in claim 1. Finally, claim 10 is amended to depend from claim 9. The change of dependence from claim 10 to 9 provides the antecedent basis for "coil" and for the phrase "second component." Similarly,

the incorporation of the phrase "positioned atop of the carrier to form a first component of the electric machine" corrects the lack of antecedent basis in claim 10 for "first component."

**B. Rejection Under 35 U.S.C. § 102**

Claims 1-4 are rejected under 35 U.S.C. § 102(a) as being anticipated by either Witherspoon et al. or Gabel et al.

For a claim to be anticipated under § 102, "each and every element of the claimed invention be disclosed in the prior art. . . . In addition, the prior art reference must be enabling, thus placing the allegedly disclosed matter in the possession of the public." *Akzo N.V. v. United States Int'l Trade Comm'n*, 1 USPQ 2d 1241, 1245 (Fed. Cir. 1986), cert. denied, 482 U.S. 909 (1987). None of the references cited by the Examiner disclose every element of the claimed invention for the reasons set forth below.

Gabel and Witherspoon both disclose a type of kinetic spraying process. However, neither describes an electric machine having " admixture having microstructures of permanent magnet material embedded in the binder material" as recited in amended claim 1. Gabel does state that the spraying process of its disclosure may be used "to deposit metal coatings including aluminum, nickel, copper, or zinc on metallic, ceramic, or polymeric substrates. (Gabel, col. 5, ll. 44-49.) Gabel goes on to state that "[i]f an alloy coating is required, then powder particles consisting of a mixture of metallic powders in proportion to the constituents of the alloy are selected." Gabel does not appreciate that an admixture having microstructures of permanent magnet material embedded in the binder material may be formed and used as a component of an electric motor. (Gabel, col. 5, ll. 51-53.) Similarly, Witherspoon discloses a pulsed arc spraying process that may be used to form a number of materials. (Witherspoon, Abstract.) Witherspoon only mentions in Table 1 that this process may be used to form magnetic material without any details. (Witherspoon, col 17.) Accordingly, independent claim 1 and its dependent claims 2-4 are not anticipated by Gabel or Witherspoon.

Claims 1-4 and 7-9 are rejected under 35 U.S.C. § 102(a) as being anticipated by Sickafus. Sickafus discloses a planar micromotor that comprises a stator means having radially extending microcoils supported by a substrate and a rotor means that rotate in response to the stator means. The rotor means is described as having "a plurality of radially extending regions or members which are magnetic or otherwise responsive to the electromagnetic fields of the stator." (Sickufus, col. 2, ll. 56-59) Sickufus does not mention or appreciate the utility of using a magnet that is an "admixture having microstructures of permanent magnet material embedded in [the] a binder material" as required by claim 1. Similarly, Sickafus does not mention that the "admixture of magnetic material and binder material has a particle size less than 325 mesh." (Claim 2) Moreover, Sickafus does not mention using magnet materials selected from nickel, cobalt, samarium-cobalt, aluminum-nickel-cobalt, neodymium-iron-boron and samarium-iron-nickel as provided in claim 3. Sickafus does not mention the binders in claim 4 because Sickus does not discuss using magnetic particles embedded in a binder. Finally, claims 7-9 are also not anticipated by Sickafus since these claims incorporate the limitations of claim 1. Accordingly, claims 1-4 and 7-9 are not anticipated by Sickafus.

**C. Rejection Under 35 U.S.C. § 103**

Claims 7-9 are rejected under § 103(a) as being unpatentable over Witherspoon et al or Gabel et al.

The Examiner has rejected claims 7-9 for the same reasons as set forth for the § 102 rejection. The Applicant respectfully refers the Examiner to the discussion above. In summary, neither Gabel nor Witherspoon describe the use of an "admixture having microstructures of permanent magnet material embedded in [a] binder material." The Examiner statement that "these dependent claims are convention and do not render these claims unobvious" is therefore inapplicable since these claims depend from claim 1 which is allowable. Accordingly, the applicant respectful asserts that claims 7-9 are patentable over Gabel and Witherspoon.

**Conclusion**

Applicants have made a genuine effort to respond to each of the Examiner's rejections in advancing the prosecution of this case. Applicants believe that all formal and substantive requirements for patentability have been met and that this case is in condition for allowance, which action is respectfully requested. If a telephone or video conference would help expedite allowance or resolve any additional questions, such a conference is invited at the Examiner's convenience.

Applicants believe that no additional fees are required as a result of the filing of this paper. However, the Examiner is authorized to charge any additional fees or credits as a result of the filing of this paper to Ford Global Technologies, Inc.'s Deposit Account No. 06-1510 as authorized by the original transmittal letter in this case. If a telephone or video conference would help expedite allowance or resolve any additional questions, such a conference is invited at the Examiner's convenience.

Respectfully submitted,

**Franco Leonardi et al.**

By James W. Proscia  
James W. Proscia  
Reg. No. 47,010  
Attorney/Agent for Applicant

Date: July 10, 2003

**BROOKS & KUSHMAN P.C.**  
1000 Town Center, 22nd Floor  
Southfield, MI 48075  
Phone: 248-358-4400  
Fax: 248-358-3351